

**In the Claims:**

Please cancel claims 1, 17 and 18.

Please amend claims 5-7, 9-12, 15 and 19 as set forth below in the "Listing of Claims".

Please add new claims 21 and 22 as set forth below in the "Listing of Claims".

**LISTING OF CLAIMS**

Claim 1 (Canceled)

Claim 2 (Withdrawn): A cleaning method of a film-forming unit that forms a thin film on an object to be processed by supplying a process gas into a reaction chamber containing the object to be processed, the method comprising;

a purging step of purging an inside of the reaction chamber by supplying into the reaction chamber a nitrogen-including gas that includes nitrogen and that is capable of being activated,

wherein the purging step has a step of activating the nitrogen-including gas and causing the activated nitrogen-including gas to react with metallic contaminant contained in a member in the reaction chamber so as to remove the metallic contaminant from the member.

Claim 3 (Withdrawn): A cleaning method of a film-forming unit that forms a thin film on an object to be processed by supplying a process gas into a reaction chamber containing the object to be processed, the method comprising;

a deposit-removing step of removing a deposit stuck to an inside of the film-forming unit by supplying into the reaction chamber a cleaning gas that includes fluorine, and

a purging step of purging an inside of the reaction chamber by supplying into the reaction chamber a nitrogen-including gas that includes nitrogen and that is capable of being activated,

wherein the purging step has a step of activating the nitrogen-including gas and causing the activated nitrogen-including gas to react with the fluorine diffused into a member in the

reaction chamber during the deposit-removing step, so as to remove the fluorine from the member.

Claim 4 (Original): A cleaning method of a film-forming unit that forms a thin film on an object to be processed by supplying a process gas into a reaction chamber containing the object to be processed, the method comprising;

a deposit-removing step of removing a deposit stuck to an inside of the film-forming unit by supplying into the reaction chamber a cleaning gas that includes fluorine, and

a purging step of purging an inside of the reaction chamber by supplying into the reaction chamber a nitrogen-including gas that includes nitrogen and that is capable of being activated,

wherein the purging step has a step of nitriding a surface of a member in the reaction chamber by activating the nitrogen-including gas.

Claim 5 (Currently Amended): A cleaning method of a film-forming unit according to any of claims 1 to claim 4, wherein

the nitrogen-including gas is ammonia, dinitrogen monoxide or nitric oxide.

Claim 6 (Currently Amended): A cleaning method of a film-forming unit according to any of claims 1 to claim 4, wherein

during the purging step, the inside of the reaction chamber is maintained at a range of 133 Pa to 53.3 kPa.

Claim 7 (Currently Amended): A cleaning method of a film-forming unit according to any of claims 1 to claim 4, wherein

during the purging step, the nitrogen-including gas is supplied into the reaction chamber heated to a predetermined temperature in order to be activated.

Claim 8 (Original): A cleaning method of a film-forming unit according to claim 7, wherein  
during the purging step, the inside of the reaction chamber is heated to a range of 600 °C to 1050 °C.

Claim 9 (Currently Amended): A cleaning method of a film-forming unit according to ~~any of claims 1 to~~ claim 4, wherein  
the member in the reaction chamber consists of quartz.

Claim 10 (Currently Amended): A cleaning method of a film-forming unit according to ~~any of claims 1 to~~ claim 4, wherein  
the process gas comprises ammonia and a silicon-including gas,  
the thin film is a silicon nitride film, and  
the nitrogen-including gas is an ammonia gas.

Claim 11 (Currently Amended): A film-forming method comprising  
a cleaning step of cleaning a film-forming unit in accordance with a cleaning method of a film-forming unit according to ~~any of claims 1 to~~ claim 4, and  
a film-forming step of heating the inside of the reaction chamber containing the object to be processed to a predetermined temperature, and forming a thin film on the object to be processed by supplying a process gas into the reaction chamber.

Claim 12 (Currently Amended): A film-forming unit that forms a thin film on an object to be processed by supplying a process gas into a reaction chamber containing the object to be processed, the film-forming unit comprising;  
a nitrogen-including-gas supplying unit that supplies directly into the reaction chamber a nitrogen-including gas that includes nitrogen and that is capable of being activated,  
an activating unit that activates the nitrogen-including gas, the activating unit being a heating unit, and

a nitriding unit that nitrides a surface of a member in the reaction chamber by controlling the activating unit so as to activate the nitrogen-including gas.

Claim 13 (Withdrawn): A film-forming unit that forms a thin film on an object to be processed by supplying a process gas into a reaction chamber containing the object to be processed, the film-forming unit comprising;

a nitrogen-including-gas supplying unit that supplies into the reaction chamber a nitrogen-including gas that includes nitrogen and that is capable of being activated,  
an activating unit that activates the nitrogen-including gas, and  
a contaminant-removal controlling unit that removes metallic contaminant from a member in the reaction chamber by controlling the activating unit so as to activate the nitrogen-including gas and by causing the activated nitrogen-including gas to react with the metallic contaminant contained in the member.

Claim 14 (Withdrawn): A film-forming unit that forms a thin film on an object to be processed by supplying a process gas into a reaction chamber containing the object to be processed, the film-forming unit comprising;

a cleaning-gas supplying unit that supplies into the reaction chamber a cleaning gas that includes fluorine,  
a nitrogen-including-gas supplying unit that supplies into the reaction chamber a nitrogen-including gas that includes nitrogen and that is capable of being activated,  
an activating unit that activates the nitrogen-including gas, and  
a fluorine-removal controlling unit that removes fluorine from a member in the reaction chamber by controlling the activating unit so as to activate the nitrogen-including gas and by causing the activated nitrogen-including gas to react with the fluorine diffused into the member.

Claim 15 (Currently Amended): A film-forming unit that forms a thin film on an object to be processed by supplying a process gas into a reaction chamber containing the object to be processed, the film-forming unit comprising;

a cleaning-gas supplying unit that supplies directly into the reaction chamber a cleaning gas that includes fluorine,

a nitrogen-including-gas supplying unit that supplies directly into the reaction chamber a nitrogen-including gas that includes nitrogen and that is capable of being activated,

an activating unit that activates the nitrogen-including gas, the activating unit being a heating unit, and

a nitriding unit that nitrides a surface of a member in the reaction chamber by controlling the activating unit so as to activate the nitrogen-including gas.

Claim 16 (Original): A film-forming unit according to any of claims 12 to 15, wherein the nitrogen-including gas is ammonia, dinitrogen monoxide or nitric oxide.

Claims 17 and 18 (Canceled)

Claim 19 (Currently Amended): A film-forming unit according to any of claims 12 to 15, wherein

~~the activating unit is a~~ heating unit that heats the inside of the reaction chamber to a range of 600 °C to 1050 °C.

Claim 20 (Previously Presented): A film-forming unit according to any of claims 12 to 15, further comprising

a pressure-adjusting unit that maintains the inside of the reaction chamber at a range of 133 Pa to 53.3 kPa.

Claim 21 (New): A cleaning method of a film-forming unit according to claim 4, wherein the cleaning gas comprises fluorine gas.

Claim 22 (New): A cleaning method of a film-forming unit according to claim 4, wherein the thin film is a silicon nitride film.